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Traps of incommensurability in the case study of a person with disability

Abstract

Incommensurability is a trap which waits for a researcher, especially in complex research concepts. Complex concepts are those which consist of several methods (of collecting and analyzing data) or several techniques used within one method. Case study is an example of such a concept. Applying different theories as reference points, changing research perspectives, using various ways of analyzing data are typical features of case study. They enhance the appearance of different types of incommensurability. Mixing the perspectives makes it impossible to understand and construct a coherent individual concept of case study. The article is aimed at identification and discussion of some selected types of incommensurability, which is exemplified by the case study of a person with disability.

Keywords: incommensurability, case study, disability.

Pułapki niewspółmierności (*incommensurability*) w studium przypadku osoby z niepełnosprawnością

Abstrakt

Niewspółmierność jest jedną z pułapek czyhających na badacza, szczególnie w złożonych koncepcjach badawczych. Złożone koncepcje to te, które składają się z kilku metod (zbierania i analizowania danych) lub wielu technik wykorzystywanych w obrębie jednej metody – ich przykładem jest studium przypadku. Wykorzystywanie różnych teorii jako punktów odniesienia, zmiany perspektyw badawczych, stosowanie odmiennych sposobów analizowania danych – to typowe cechy studium przypadku. Sprzyjają one pojawianiu się różnych typów niewspółmierności. Mieszanie perspektyw uniemożliwia

zrozumienie i skonstruowanie jednostkowej, spójnej koncepcji studium. Celem artykułu jest zidentyfikowanie i rozpatrzenie wybranych typów niewspółmierności na przykładzie studium przypadku osoby z niepełnosprawnością.

Słowa kluczowe: niewspółmierność, studium przypadku, niepełnosprawność.

Introduction

The problem of incommensurability in designing research projects in the field of pedagogy is a frequently ignored motif. However, this does not mean that it is absent in research practice. The thesis put forward in this study is that incommensurability is one of the most dangerous traps lurking at a researcher, especially in complex research concepts. The assumption is made that complex concepts are those which comprise several methods (of data collection and analysis) or many techniques applied within one method. Another indicator of complex methods is a multidimensional research object. My second thesis is reflected in the statement that disability determines human functioning at many dimensions, it enhances a person's uniqueness and is favourable for emphasizing this person's individuality. Moreover, disability generates many social circumstances which are missing in the life of people without disabilities. The examination of daily routine of a disabled person is an example of a complex, multifaceted research problem. This becomes an inspiration to apply case study as a method of cognition, description and understanding of the person's daily routine. Owing to the use of many research techniques in investigation of one single object, this method enables its detailed picture seen from many (biological, psychological, social, cultural) angles. Such multidimensional cognition opens the perspectives for identifying the barriers and understanding the needs of a person with disability, which results in a chance for constructing an individual concept of this person's functioning. This is of particular significance in educational studies, which are often aimed at working out useful conclusions to apply in practice.

In a natural way, the complexity of a research object determines the compilation of data collection and discussion techniques. This encourages to use various theories as reference points, to change research perspectives and to apply different approaches to data analysis. In this way, different types of incommensurability come into being. Case study might be just one of the methods in the whole research project and its relations with other methods are determined by the structure and goals of the project. In this case, different types of incommensurability appear as well. Their identification and discussion is the aim of this article.

Case study – preliminary assumptions

Individual case study as a research method cannot be defined in an unambiguous way. It means both the research process and the research outcome. It is not an entirely qualitative method (Stake, 2009, s. 627), although such opinions also appear. This can be exemplified by the following definition which says that it is "one of qualitative methods […] consisting in thorough and in-depth examination of one typical case (with the use of diverse research techniques and tools)" (Guziuk-Tkacz, Siegień-Matyjewicz 2012, s. 256). It is impossible to agree fully with this definition as case study may be a method of qualitative, quantitative and mixed studies (see: e.g. Pawłowska, 2012, s. 268). The cases also do not need to be typical (see: e.g. Flyvbjerg, 2005; Stake, 2009; Yin, 2015). On the contrary, it is uniqueness which is a frequent cause of choosing a case for studying. In general, definitions of the discussed method focus on the main research object and research goals (recognition, description, understanding the object), as well as on the applied research techniques (cf. Yin, 2015, p. 47). With slight simplification, it is assumed here that case study is a method aimed at cognition and understanding of the object with the application of many research techniques. They allow for recognition, description, and understanding of the case in different perspectives and in regard to many variables.

There are many typologies of cases and their construction is based on various criteria. Taking into account the above mentioned assumptions, complex cases (e.g. institution, school culture, class climate, social environment) and simple cases (a person) can be distinguished. Due to the nature of the research process and the applied methods, case studies can be divided into qualitative, quantitative, or mixed. Due to their aim, the following distinction is usually applied: exploratory, descriptive, explanatory case studies (quoted in: Strumińska-Kutra, Koładkiewicz, 2012, p. 14). There are also typologies constructed on mixed criteria and generating inseparable types. What can serve as examples of such a typology are the types distinguished by Bent Flyvbjerg: extreme / deviant, maximum variation, critical, paradigmatic case studies (quoted in: Strumińska-Kutra, Koładkiewicz, 2012, p. 13).

The types of case study are tightly associated with the research object, method and goals which the researcher wants to achieve. In general, the goals can be divided into three groups:

- practical goals – to provide adequate support,
- scientific goals – to recognize and understand,
- didactic goals – to learn something (Baranowicz, 2001, p. 116).

The tradition of using case study, deeply rooted in practical research aimed at the implementation of particular activities (e.g. support), consolidates and justifies its applicative goals (Hocutt, Fowler, 2009, pp. 53-54). Among the basic goals in this field, there is the providing of some practical solutions to a particular type of

problems, e.g. the ones related to organization or evaluation of social interventions (quoted in: Strumińska-Kutra, Koładkiewicz, 2012, p. 4). These objectives often become an introduction to the fulfillment of scientific aims as their basis is getting acquainted with the case along with the surrounding context (cf.: Gajdzica, 2016).

Scientific goals are formulated in various ways. Some of them are oriented towards description, for instance:

- presenting the functioning of an examined person or a particular care or educational institution (Łobocki, 1999, p. 246),
- a detailed description of an examined person or object from (if possible) many angles and in regard to various aspects (Pilch, 1998, p. 298),
- a thorough examination and detailed description of a particular case or several cases (quoted in: Kubinowski, 2010, p. 172).

Other goals emphasize the providing of knowledge, e.g.:

- providing context knowledge,
- providing prognostic knowledge (e.g. hypotheses to verify on a big research sample),
- providing generalizing knowledge (which falsifies the case of a black swan) (Flyvbjerg, 2005, pp. 42–55),
- acquiring knowledge concerning individuals, groups, organizations, and (social, political) phenomena (Yin, 2015, pp. 36–37).

The description of a case and the acquisition of some particular knowledge concerning this case may help to explain and understand it, which is reflected in another group of goals, e.g.:

- case study is a scheme aimed at the description and explanation of the course or the picture of a general phenomenon situated in a particular person, group or institution (Rubacha, 2008, p. 329),
- the method of case study has the purpose of comprehensive description and understanding of a case along with the surrounding context (quoted in: Strumińska-Kutra, Koładkiewicz, 2012, p. 4),
- a particular case used in the discipline of management is applied to describe, to explain and, most frequently, to generalize a particular phenomenon which is in the researcher's field of interest (Obłój, Wąsowska, 2015, p. 51).

Knowledge and understanding constitute an introduction to the group of theory creating goals, e.g.:

- case study is a qualitative research scheme aimed at creating an individual theory of a general phenomenon (Konarzewski, 2000, p. 78),

- the obtained research results are used for creating general abstract notions which allow to describe and explain the examined phenomenon,
- creating a theory which enables the explanation and prediction of the social reality in a certain area,
- modification or supplementation of existing theories,
- referring to broader category of similar phenomena (quoted in: Strumińska-Kutra, Koładkiewicz, 2012, p. 4).

Thus, scientific goals of case study can be organized into a certain continuum: description – cognition (acquisition of knowledge) – explanation (interpretation) – understanding – theory building (falsification, supplementation of the existing theory). While assuming the linear course of reasoning, the aims of using case study are understanding and theory building. Applying these goals as superior does not depreciate the previous ones and presents them as part of a certain stage and a necessity for implementing the main aims (Gajdzica, 2016).

The didactic goals of the discussed method can be viewed in at least four areas:

- the acquisition of research competences,
- collecting the materials for discussion and analyses which are useful in broadening the knowledge of the world,
- getting acquainted with a certain section of social reality,
- learning the own self.

In practice, it is difficult to separate (with a clear-cut borderline) the scientific goals – also from other practical and scientific goals.

The didactic issues in scientific works dealing with case study are usually marginalized in the discussion. They are often depreciated and treated (often wrongly in my opinion) as totally diverging from scientific goals (Gajdzica, 2016). This depreciation can be exemplified by the belief that case study used for educational purposes does not need to contain a full or correct interpretation of facts (Yin, 2015, p. 37). It is hard to accept this standpoint, because the fulfillment of didactic goals does not exclude the use of theories, as well as the conducting of reliable scientific analyses used in educational processes (see e.g. Fortuna, 2010).

The diversity in defining case study, its types and goals, creates many possible configurations of its application in complex research projects. Some examples of this are presented in the next section.

Case study as a method in a research project

Individual case study is a widely applied method in social and humanistic sciences. Its role in research projects can be various. This is presented in the following examples of case study in relation to other methods:

1. Case study as the only method. The whole research project is based entirely on the case study construction. Its essence is an attempt at viewing the object (a person, phenomenon, event, institution, process) from different perspectives, making use of different sources of information and techniques of cognition. Yet, all of them are subordinated to the major goal of the study, which is identical with the main goal of the research project.
2. Case study as the main method. The research project is based on case study, but is complemented with other methods. They have the preparatory (introductory) or/and supplementary function in relation to case study. The tasks of these complementing methods in relation to case study are shown in the following examples:
   - Recognizing the research field to generate valuable research problems – to create a list of questions which organize the research contents of a study. In practice, this is a relatively rarely applied construction.
   - Eliciting a group of cases constituting the object explored in a case study. Depending on the aims of the whole project, these might be average, extreme or other cases – selected in compliance with the precisely specified object of the researcher's interest.
   - An introduction into the subject matter of a study, showing its significance in a broader context of the examined objects (phenomena, people, processes). These are usually quantitative studies which statistically justify the importance of the undertaken problem.
   - Placing the results of the study in a broader context. This consists in the separation of individual outcomes (elements of the study) and the recognition of their occurrence (more rarely – relations, tasks) in a big research sample.
   - The supplementation with additional research reaching beyond the established framework of a study.
3. Case study as one of equal rank methods. Data collection and analysis take place in several methods. In the whole project, they are used to fulfill different research tasks which compose a coherent entity. Their relations are usually symmetrical. The methods complement one another and none of them has a leading role.
4. Case study as a supplementary method. It assumes a subordinated role in relation to another method. Case study can fulfill a preparatory or supplementary function for the main method. This is presented in the following examples:
   - Generating the research problems subjected to exploration with the use of other (usually quantitative) methods.
   - Exemplification of the results. It has a task of individual illustration of a problem investigated with the use of the main method. The exemplifica-

tion is most frequently applied in research projects in social and humanistic sciences.

- Deepening the results. It is aimed at exploring the problem in regard to a bigger number of variables. Its value is the capturing of these variables which are difficult to consider in the research conducted in the main method.

In an analogous way, the functions of particular techniques within case study can be considered. One of them can have the leading role, others can be subordinated to it. Most frequently however, the techniques constitute a set of complementary ways of data collecting and analyzing.

The relations between methods within one research project (in the same way as the relations of techniques within one case study) raise many problems which can pose the accusation of eclecticism. Subordination to one aim necessitates the applying of coherent theoretical and methodological assumptions. Their incommensurability is a serious research error.

Incommensurability as a trap of case study

Two things are commensurable if they can be organized with the use of the same measure. If two theories are incommensurable, there might be no neutral point of view, from which an objective evaluation can be made of the advantages of one over the other (Blackburn 2004, p. 439). This problem draws attention of Thomas S. Kuhn (2009, pp. 336–344), who shows the complicated communication of the supporters of incommensurable theories. Although the author relates this problem mostly to assessing the value (relevance, usefulness) of various theories, it seems worth transferring into the area of the relations between particular assumptions and elements of a research project. The use of various theories, concepts, and scientific reflections is a natural consequence of the investigated problem. No awareness of their incommensurability becomes the main trap associated with selecting them. Incommensurability may also concern the applied methods (techniques and tools) of collecting and analyzing data. Therefore, what poses the threat of incommensurability are complex research projects as well as the methods within which many research techniques and tools are applied. The exemplification of this problem takes place here by focusing on the method of case study. However, it should be borne in mind that similar pitfalls wait for a researcher in the case of different methods within the same research project. Despite no direct references, the following concepts are used in the further part: ontological, linguistic, methodological, observational incommensurability; Paul K. Feyerabend's (1979; 1996) concept of quantitative empirical consequences, and their Polish interpretation by Kazimierz Jodkowski

(1984). What follows is the exemplification of this problem by presenting two selected traps of case study of a person with disability, which are rooted in:

- ontological assumptions (which constitute the basis for viewing disability and other key categories in the study),
- epistemological assumptions (for the needs of the article associated mostly with the position of an observer – and as a consequence, with cognitive techniques, information sources, ways of explaining and interpreting the data).

Assuming a particular way of viewing the world is the foundation of each research project. This basis consists of theories and sets of theorems aimed at introducing and defining the major research categories, problems, or at constructing research tools (or selecting the existing ones). Most frequently, these theories are also a tool for explaining and interpreting data. In practice, this entails their repeated use in various stages of the research. The construction of theoretical foundations of case study usually consists of a set of theories. Practically, their incommensurability, resulting from different assumptions, diversified basic theorems and their interrelations, makes it impossible to create a coherent baseline concept. The category of disability may serve as an example. Assuming its interactive model based on relations, it should be treated as a social construct seen from the observer's point of view. This necessitates searching for other concepts (e.g. related to roles, identity, barriers) in the field of interpretative paradigms (e.g. constructivism, social interactionism). On the other hand, applying an objective (e.g. medical) model of disability provides the orientation towards building assumptions on structural-functional concepts associated with a measurable cause-effect approach to the reality.

Most often, the basic categories of the case study of a disabled person concern their qualities (individuality, uniqueness versus averageness) and relations with the environment. Both the qualities and the relations should stem from the same common paradigm. This will allow to avoid cases of language incommensurability which describe these qualities and relations as well as contradictory relations associated with assumptions (e.g. concerning the objective or subjective nature of their presence).

What can become an example of a coherent theory is the concept of individuality treated as an existential mechanism which fulfills important roles in the life of individuals and whole social groups (Szczepański, 1988, p. 8). Individuality constitutes a superstructure which integrates human functioning on many platforms. It is determined by the sets of qualities possessed by a person. Szczepański distinguishes three sets of qualities which might determine the organizing of the assumptions of case study. These are the following:

- the features common to all people or to some big or small groups;

- the similar features shared by many people;
- the features typical of only one person – the ones which constitute the foundation of this person's individuality (Szczepański 1988, p. 7).

This concept, elaborated and developed in the field of special education by Aleksander Hulek (1980, pp. 462–478), presents a ready-made scheme of case study of a disabled person. It enables noticing and describing what constitutes uniqueness (in the aspect of socially defined averageness), allows to notice what partially overlaps and what is fully shared as regards the qualities of a disabled person and other people. Moreover, this concept is the basis for noticing the significance of the context (the surrounding world) for the development of the research object. This example illustrates the research construction of the case study derived from a particular theory, as well as necessitates a coherent specification of its ontological assumptions.

Epistemological incommensurability is reflected in a set of research techniques or tools for collecting data and sources of information. The starting point for this scope of case study is observational incommensurability. It is based on the thesis that perception of the surrounding reality depends on the observer's beliefs, knowledge and emotions (Jodkowski, 1984, p. 12). Thus, this perception also depends on the researcher's position, which is related to their perspective and attitude to the examined object. Two positions and their consequences are presented in Table 1.

Table 1. Roles and perspectives of the researcher (Gajdzica 2016a)

Inner perspective and its research consequences	**Outer perspective and its research consequences**
Actor – being in the world	Observer – being outside the world
Own experience of disability	Indirect experience
Engagement of a person – emotional bond	Engagement of a researcher – neutrality or apparent neutrality
Engaged knowledge – participatory (aspectual) complexity	No complexity or theoretical complexity
Knowledge in the scope of real and formal categories	Knowledge in the field of formal and real categories
Fragmentary knowledge	Global knowledge
Context as uncertainty	Organized context
Respondents' reactions – the researcher as the own (the role and syndrome of a clown)	Respondents' reactions – the researcher as an alien (the role of an expert)
Research object as an individual case	Research object as a representation of research fields
Result as fear – respondents' reception (syndrome of not distaining the own nest)	Result as a set of data

The assumptions presented in the table show that combining both perspectives and fusing them to create a coherent concept requires a lot of negotiation and sometimes is not fully feasible. The indicated researcher's positions result in the choice of appropriate tools for collecting (measuring, describing) the data. The researcher's experience and attitude to the examined object is important as well. Two different ways of collecting data generate two different sets of data. Their explanation/interpretation usually requires rooting in paradigmatically different theories, which brings about linguistic incommensurability and quantitative empirical consequences. Incommensurability is manifested in the diversified perception of the essence of the selected categories and in different meanings of the undertaken research problems. In the aspect of one theory they have priority rank and in the other theory – they are not significant.

Ending

Case study turns out to be invaluable when the phenomenon in which a researcher is interested is rare (Konarzewski, 2000, p. 79). This statement does not depreciate the study of an average case, which exemplifies (in a form of representation) a specified group – especially if the study enhances the discovering/constructing a model or a concept aimed at explaining the data collected in the studies on big groups. However, it is worth mentioning that cases themselves comprise the assumption of originality, often uniqueness as well, which goes beyond any well-known general rules. Therefore, in each particular case, the researchers seek both what is unique and what is average (Stake, 2009, p. 629). Among other things, this is the reason why this method is particularly valuable in studies into people with disability, including their daily routine in relations with other objects (Gajdzica, 2016). What should be treated as important due to the complexity of this method (multitude of its cognitive scopes) is the preliminary establishing of paradigmatic (ontological and epistemological) assumptions. Uniqueness versus averageness of every case may be revealed (if it is assumed to exist objectively) or constructed (if its subjective foundation is assumed). The mixing of both perspectives makes it impossible to understand and construct a coherent individual concept of case study.

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